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North of the Delta
Offstream Storage Investigation

Progress Report

Appendix S: Mammal Surveys

January 2001

Integrated
Storage
Investigations

CALFED
BAY-DELTA
PROGRAM

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1.0 Introduction

1.1 History and Background

Water availability and use in California has been the topic of many debates throughout the State's history. The latest of these has led to the current State and federal agency investigations of future water demands, quality, and availability for California under a 1994 "Framework Agreement." This Agreement provides for increased coordination and communication for environmental protection and water supply dependability, which led to the formation of CALFED and the development of the CALFED Program.

CALFED is a cooperative interagency effort involving State and federal agencies with management and regulatory responsibilities in the Bay-Delta Estuary. The program is responsible for developing a long-term solution to fish and wildlife, water supply reliability, flood control, and water quality problems in the Bay-Delta.

The CALFED Program has been developing and analyzing a series of conveyance opportunities, which are described in a report titled *CALFED Bay-Delta Program Storage and Conveyance Component Inventories*, dated March 7, 1997. These inventories led to a more refined list of components as reported in *CALFED Storage and Conveyance Components Refinement Process*, dated October 1997. Four of the surface storage facilities described in this report are the Sites, Colusa, Thomes-Newville, and Red Bank Projects.

The California Department of Water Resources' Northern District became the lead agency in investigating the potential feasibility of the four Offstream Storage Facilities north of the Sacramento-San Joaquin Delta. The California Department of Fish and Game's Central Valley Bay-Delta Branch was contracted in 1997 to conduct pre-feasibility field investigations for the presence of threatened, endangered, and special status mammal species on the sites. An additional task assigned to DFG was to collect some baseline information and begin planning efforts for conducting Habitat Evaluation Procedures for future efforts. Funding for the July 1997 through June 1998 field efforts was provided from money allocated from the passage of Proposition 204 — The Safe, Clean, Reliable Water Supply Act (1996) — and additional funds were made available by the State Legislature for July 1998 through present field efforts.

This report focuses primarily on the status of the DFG's ongoing mammal field surveys on the four proposed offstream storage reservoirs but includes a brief overview of the HEP process, its value as a potential tool for assisting future field studies, and compile a list of Habitat Suitability Index Models that are available for conducting a HEP. The majority of the report, however, focuses on the mammal field studies conducted by DFG. It outlines survey methodologies and summarizes results of field investigations that occurred from July 1997 to December 1999. DFG recommendations are also provided for future study needs necessary to support an adequate Environmental Impact Report/Environmental Impact Statement and consultation under the California

Environmental Quality Act, National Environmental Protection Act, and the State and federal Endangered Species Acts.

1.2 Project Description

The four alternatives range in storage capacity from approximately 350,000 to 3 million acre-feet of water. Each of the facilities would consist of a reservoir with associated diversion and conveyance facilities. The concept is to bank high-flow or floodwater from the tributaries associated with each alternative and from the Sacramento River for later use. Depending upon the operation criteria and management, a new reservoir could potentially reduce the need for Sacramento River diversions by the Tehama-Colusa Canal and the Glenn-Colusa Irrigation District. The operation of the facilities is still being investigated by DWR's Northern District staff; therefore, specific information is not available at this time.

The proposed alternatives have not been completely defined at this time, including determination of the size of each reservoir. For the purposes of this report the highest reservoir surface elevations are considered to be the projects and only the inundation zones were surveyed during this level of field investigations. Additionally, operational studies are not available at this time, therefore, it is impossible to accurately determine the feasibility of conveyance facilities, providing mitigation needs, or enhancement potentials for the projects.

1.3 Study Area

The alternatives are all located west of Interstate 5 in the western portion of the Northern Sacramento Valley (Figure 1). The Sites Reservoir Project area is primarily in western Colusa County approximately 8 miles west of the town of Maxwell. The Colusa Reservoir Project area is an enlarged, northern extension of Sites Reservoir. The Thomes-Newville Reservoir Project area is adjacent to Thomes Creek and located in southwest Tehama County and northwest Glenn County. The Red Bank Reservoir Project area is a complex of four small reservoirs along the South Fork of Cottonwood Creek and Red Bank Creek in western Tehama County.

1.3.1 Sites Reservoir

The proposed Sites Reservoir area (approximately 14,200 acres) is located in Antelope Valley, primarily in northwestern Colusa County and partially in southwestern Glenn County, approximately 8 miles west of the town of Maxwell (Figure 2). The site is predominantly non-native grassland and managed primarily for cattle grazing with some areas of dryland farming. Other habitats include northern clay hardpan vernal pools, swales, seasonal wetlands, alkaline wetlands, emergent wetlands, oak woodland, and riparian.

1.3.2 Colusa Reservoir

The proposed Colusa Reservoir area (approximately 27,900 acres) is also located in Antelope Valley in northwestern Colusa and southwestern Glenn

Figure 1. Location of the four proposed offstream storage reservoirs.

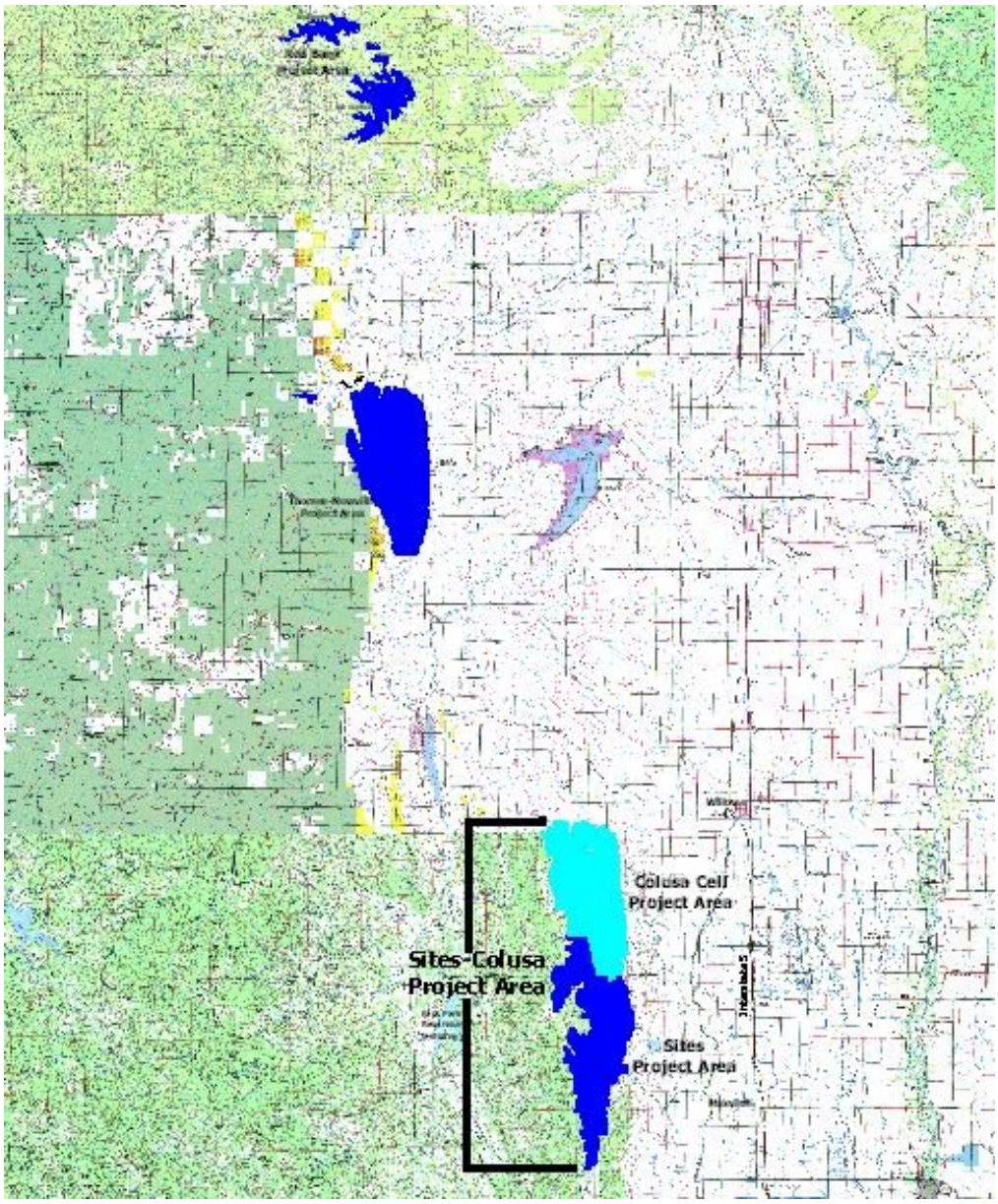
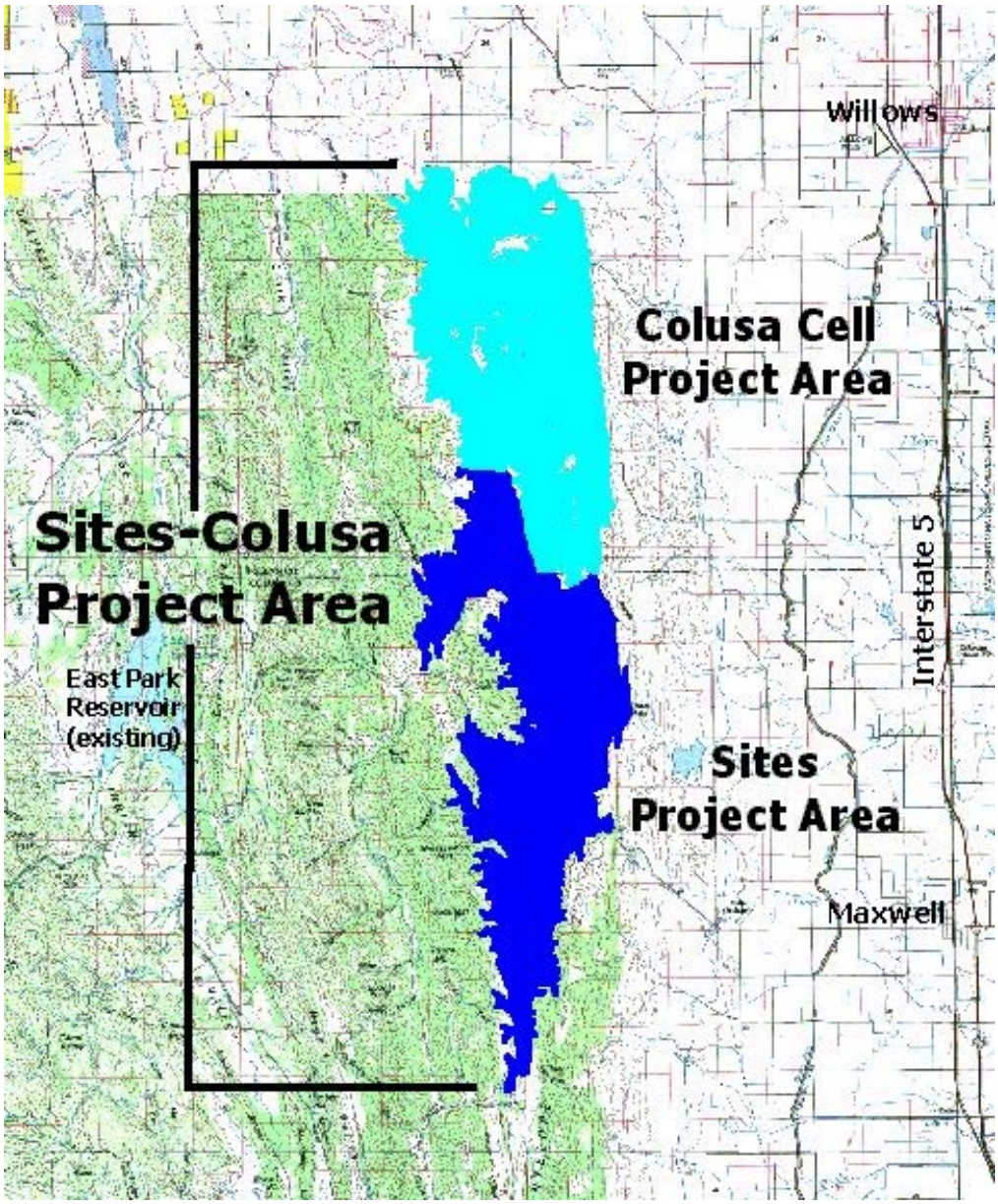


Figure 2. Location of the proposed Sites Reservoir and Colusa Cell Project areas in western Colusa and Glenn Counties.



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Counties (Figure 2). It can best be described as an enlargement of the Sites Reservoir described above. The enlargement (an additional 13,700 acres of land to the north of the Sites Reservoir) would incorporate additional acreages of predominantly non-native grassland which is managed primarily for cattle grazing. Other habitats include northern clay hardpan vernal pools, swales, seasonal wetlands, alkaline wetlands, oak woodland, and riparian. For the purposes of this report, surveys and results will refer only to the northern extension of the Sites Reservoir, hereinafter referred to as the Colusa Cell.

1.3.3 Thomes-Newville Reservoir

The proposed Thomes-Newville Reservoir area (approximately 17,100 acres) is located adjacent and to the south of Thomes Creek in southwestern Tehama and northwestern Glenn Counties, upstream of the existing Black Butte Lake (Figure 3). It is located approximately 25 miles west of the town of Corning. The site is predominantly non-native grassland managed for cattle grazing. Other habitats include northern clay hardpan vernal pools, swales, seasonal wetlands, alkaline wetlands, emergent wetlands, oak woodland, and riparian.

1.3.4 Red Bank Reservoir

The proposed Red Bank Reservoir Project area (approximately 4,900 acres) is located in western Tehama County (Figure 4). This alternative is actually a series of four small reservoirs, or components, linked together. The components are Dippingvat, Lanyon, Bluedoor, and Schoenfield Reservoirs. The Dippingvat component is located along South Fork Cottonwood Creek. The Lanyon component is located to the southeast, just east of Jackass Canyon. The Bluedoor component is adjacent to the Lanyon component and is along North Fork Red Bank Creek. The Schoenfield component is just south of the Bluedoor component and includes Red Bank, Dry, and Grizzly Creeks. The predominant habitat types are blue oak woodland, foothill pine, and chaparral. Other habitats include riparian and seasonal wetlands.

1.4 Scope of Study

In 1997, DWR contracted with DFG to conduct field studies to inventory the special status mammal species that could occur in the project areas and assess the potential of any red flags. Red flags could be considered any species, habitat, or situation that, in and of itself, constitutes a project stopper. A project stopper would be something that might be considered unmitigatable by the regulatory agencies or have such high mitigation costs that the project proponent could no longer afford the project.

An additional task assigned to DFG was to conduct some preliminary planning efforts for a HEP. The primary objective was to compile a list of HSI Models available for conducting a HEP. Formal surveys for the HEP have not been conducted, nor are they scheduled at this time. The focus at this stage of field surveys was to compile species lists of the project areas and HSI Models

available, which would assist with implementation of the HEP process in future survey efforts.

The scope of the field investigation by DFG was limited to the mammals directly impacted by construction of the reservoirs (within the footprint or inundation zone). The level of effort, however, has varied among the alternatives. Appurtenant facilities and right-of-way impacts in the immediate areas have not been included in the investigations because of the lack of access. Additionally, the scope of the investigation has not addressed nor has it included the potential impacts associated with conveyance to and from the project or use of the water stored by the project. These issues will be addressed in future studies of the alternatives.

1.4.1 Initial Study (1997-1998)

The initial purpose of this study was to document special status species' presence and distribution. Special status species are those species designated as threatened, endangered, sensitive, or fully protected by State and/or federal agencies. The direction was given by DWR to focus on special status species for each alternative. It was agreed that this would provide some comparable baseline information on each alternative, which could assist them in determining the potential feasibility of each alternative. The results of special status species surveys would also provide a better understanding of some of the potential mitigation needs. Field survey methods were relatively the same for each alternative because the list of potential species was the same or similar for each. The level of effort, however, varied among the alternatives because access varied in the alternatives.

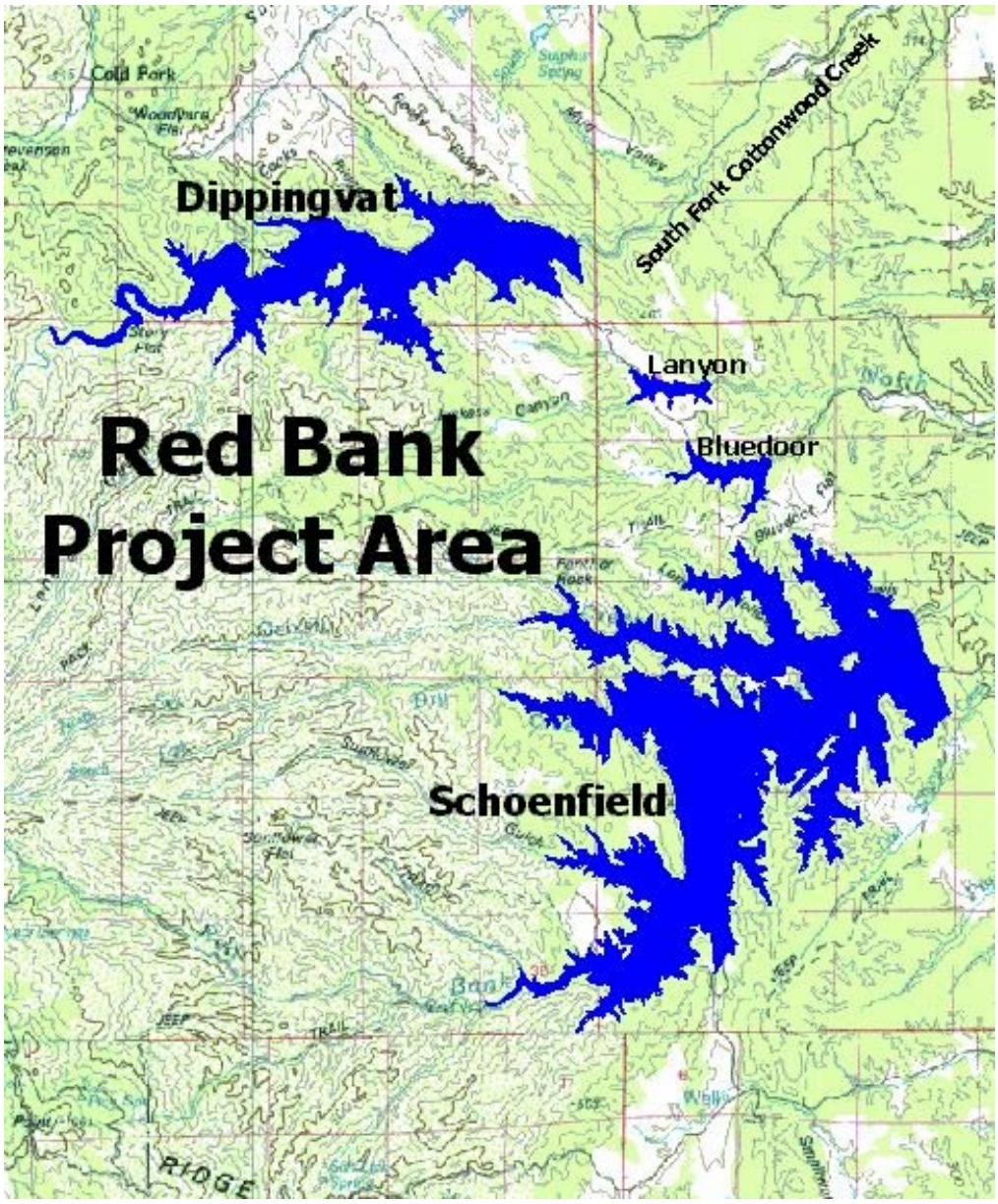
1.4.2 Current Effort (1998-1999)

During the second year of studies, field investigations were modified to address the presence, distribution, and, where possible, relative abundance of all mammal species in the project areas. These studies were designed to address the future compliance needs of the CEQA and NEPA as well as address the State and federal Endangered Species Acts. The current efforts are the first of multiple years of field investigations needed to evaluate the potential impacts associated with project construction.

In addition, staff has been researching the availability of HSI Models that could be used in future survey efforts to conduct a HEP. HEP is a valuable tool that will help with future investigations of the alternatives. It is a computerized method for use in habitat inventory, impact assessment, and mitigation studies. The method consists of a basic accounting procedure that combines habitat quality (defined as HSI) with habitat area to calculate Habitat Units. HUs are sensitive to changes in the amount and quality of available habitat. The basic accounting procedure enables comparisons of habitat availability at several sites (baseline studies) or of changes in habitat over time (impact assessment) for various sites or project alternatives. HEP output consists of quantitative information for each species or suite of species evaluated.

Figure 3. Location of the proposed Thomes-Newville Reservoir Project area in western Glenn and Tehama Counties.

Figure 4. Location of the proposed Red Bank Reservoir Project area and its four components in western Tehama County.



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